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ABSTRACT

The staff at the Northwest Regional Educational Laboratory developed a framework that classifies factors contributing to secondary vocational education effectiveness. These factors are organized into four categories--occupational, educational, ancillary, and societal. Another study reviewed the effective schooling literature and identified six factors that relate positively to increased learning: time on task, performance expectations, student motivation, cooperative (team) learning, effective learning climate, and use of evaluation. A third study identified 13 principles of teaching and learning that provide the rationale for the organization and structure of subject matter, motivation of students, reward and reinforcement, and the selection of teaching techniques. (YLB)

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Practice Application Brief

EFFECTIVE TEACHING IN VOCATIONAL EDUCATION

Some vocational education programs are successful whereas others fail miserably. What is that ingredient that makes an educational program blossom and flourish? The staff at the Northwest Regional Educational Laboratory has developed a framework that classifies factors contributing to secondary vocational education effectiveness. These factors are organized into four categories--occupational, educational, ancillary, and societal (Owens and Crohn 1983). The following examples of outcomes are illustrative of each of the categories:

Category	Illustrations
Occupational	• Possession of occupational skills needed for job entry level
	• Possession of transferable occupational skills
Educational	• Adequate understanding of fundamental principles as a basis for advanced training
	• Articulation of high school and postsecondary training programs
Ancillary	• Possession of leadership skills
	• Ability to cope with changing technology
Societal	• Provision of a supply of people trained in emerging occupational areas
	• Effective collaboration between the business community and the schools

To nurture effective teaching in vocational education, the characteristics and practices in the classroom, the school, and the district must be complementary and supportive. Effective schooling research identifies schooling practices and characteristics associated with measurable improvements in student achievement and excellence in student behavior. Blum (1984) identifies several characteristics or practices that contribute to a positive, nurturing learning environment, including following a preplanned curriculum, monitoring learning progress, and providing incentives.

A supportive learning atmosphere established by the school administration and the community contributes significantly to the effectiveness of an educational program. Owens and Crohn (1983) reviewed the effective schooling literature and identified six factors that were shown to relate positively to increased learning. These factors are as follows:

Time on Task. In general education, a direct relationship has been established between achievement and active learning time for both individuals and groups of students. Halasz and Behn (1983) authored the only study that applied time on task to vocational education. Because no attempt was made to relate outcomes to time on task, more study is needed to investigate this promising relationship.

Performance Expectations. It has long been observed that students are likely to learn what teachers expect them to learn. Higher teacher expectations result in the establishment of a learning climate with increased and more effective instruction.

Student Motivation. Teachers can use several reinforcement techniques that will help motivate and sustain appropriate student behaviors. Hunter (1979) suggests (1) an optimal level of concern that motivates the student to greater effort and higher performance; (2) a feeling tone, in which the use (pleasant, unpleasant, or neutral) depends on the situation; (3) interest, stimulated by making learning more meaningful or more vivid and different; (4) success (motivation increases as success increases) and knowledge of results (students are more highly motivated if they know how they are doing); and (5) intrinsic motivation, developed when an activity or the learning is the reward for the effort and extrinsic motivation, developed when the student gains status, approval, grades, and so forth.

Cooperative (team) Learning. The research shows that groups have powerful effects on student behavior and motivation. Peer relationships strongly influence students feelings about the importance of behaviors, skills, and attitudes. Vocational education can provide an excellent setting for cooperative learning and team competition. Vocational teachers should (1) discuss the concept of team learning with the students; (2) form teams that reflect a range of performance, sex, and ethnic mix; (3) select rewards that are attractive to the student peer culture; and (4) observe both individual and group accountability.

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Effective Learning Climate. The learning climate refers to the attitudinal and behavioral patterns in a school that affect levels of achievement. Vocational programs usually cut across three learning environments: the total high school, the vocational program as a subculture within the school, and the workplace. There is often a wide variation in the learning climate among the three settings.

Use of Evaluation. Evaluation of student progress should be regular and consistent. In vocational education evaluation can be used to (1) assess teachers' occupational competency, (2) assess student readiness for particular learning, (3) evaluate student progress and mastery of learning objectives, and (4) determine program effectiveness. Vocational teachers have a greater opportunity than academic teachers to use competency-based performance measures, computer simulations, direct observation, and product evaluation based on standards found in business and industry.

Newcomb, McCracken, and Warmbrod (1986) identify 13 principles of teaching and learning that provide the rationale for the organization and structure of subject matter, motivation of students, reward and reinforcement, and the selection of teaching techniques.

Organization and Structure of Subject Matter

1. When the subject matter to be learned possesses meaning, organization, and structure that is clear to students, learning proceeds more rapidly and is retained longer.

2. Readiness is a prerequisite for learning. Subject matter and learning experiences must be provided that begin where the learner is.

Motivation

3. Students must be motivated to learn. Learning activities should be provided that take into account the wants, needs, interests, and aspirations of students.

4. Students are motivated through their involvement in setting goals and planning learning activities.

5. Success is a strong motivating force.

6. Students are motivated when they attempt tasks that fall in a range of challenge such that success is perceived to be possible but not certain.

Reward and Reinforcement

7. When students have knowledge of their learning progress, performance will be superior to what it would have been without such knowledge.

8. Behaviors that are reinforced (rewarded) are more likely to be learned.

9. To be most effective, reward (reinforcement) must follow as immediately as possible the desired behavior and be clearly connected with that behavior by the student.

Techniques of Teaching

10. Directed learning is more effective than undirected learning.

11. To maximize learning, students should "inquire into" rather that "be instructed in" the subject matter. Problem-oriented approaches to teaching improve learning.

12. Students learn what they practice.

13. Supervised practice that is most effective occurs in a functional educational experience.

These principles, characteristics, and practices of effective teaching contribute to explicit communication and a supportive environment that stimulates and nurtures learning. Additional information on this topic may be found by consulting the resources listed.

Resources

Blum, Robert E. *Effective Schooling Practices: A Research Synthesis.* Portland, OR: Northwest Regional Educational Laboratory. 1984. (ERIC Document Reproduction Service No. ED 255 511).

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